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WHAT IS CLAIMED IS:

1                   1.     A method of removing an obstruction, comprising the steps of:  
2                   providing an obstruction removing device, the obstruction removing device  
3     having an element movable from a collapsed position to an expanded position, the element  
4     being contained within a lumen in a delivery device in the collapsed position;  
5                   advancing the delivery device through the patient's vascular system to an  
6     obstruction in a vessel;  
7                   expanding at least part of the engaging element toward the expanded position;  
8                   coupling the engaging element to a supply of power;  
9                   moving the engaging element into contact with the obstruction; and  
10                  supplying power to the element when the engaging element is in contact with  
11     the obstruction.

1                   2.     The method of claim 1, wherein:  
2                   the coupling step is carried out with the supply of power producing an  
3     electrical charge at the engaging element.

1                   3.     The method of claim 2, wherein:  
2                   the coupling step is carried out with the supply of power producing a negative  
3     charge during the moving step.

1                   4.     The method of claim 2, wherein:  
2                   the coupling step is carried out with the supply of power producing a positive  
3     charge during the supplying step.

1                   5.     The method of claim 1, wherein:  
2                   the coupling step is carried out with the supply of power being an RF  
3     generator.

1                   6.     The method of claim 1, wherein:  
2                   the providing step is carried out with the engaging element being naturally  
3     biased toward the expanded position.

1                   7.     A method of constructing an obstruction removing device, comprising  
2     the steps of:

- 3 providing an elongate element;  
4 positioning at least one strand against the elongate element; and  
5 positioning a tube over the fiber to trap the fiber.
- 1 8. The method of claim 7, wherein:  
2 the positioning step is carried out with the fiber has a diameter of less than  
3 0.001 inch.
- 1 9. The method of claim 8, wherein:  
2 the positioning step is carried out with the fiber being a thermoplastic  
3 multifilament yarn spun from a liquid crystal polymer.
- 1 10. The method of claim 7, wherein:  
2 the positioning step is carried out with the elongate element being made of  
3 superelastic material.
- 1 11. The method of claim 7, wherein:  
2 the positioning step is carried out with the elongate element being naturally  
3 biased toward an expanded position.
- 1 12. The method of claim 7, wherein:  
2 the positioning step is carried out with the elongate element being biased  
3 toward an expanded position.
- 1 13. The method of claim 7, wherein:  
2 the providing step is carried out with the diameter of the elongate element  
3 being 0.005-0.018 inch.
- 1 14. An obstruction removal device, comprising:  
2 an insertion element having an expandable element extending from the  
3 insertion element;  
4 at least one strand extending along at least the expandable element; and  
5 a tube of material which traps the at least one strand.
- 1 15. The device of claim 14, wherein:  
2 the strand has a diameter of less than 0.005 inch.

1           16.    The device of claim 15, wherein:  
2           the strand is a thermoplastic multifilament yarn spun from a liquid crystal  
3           polymer.

1           17.    The device of claim 14, wherein:  
2           the elongate element being made of superelastic material.

1           18.    The device of claim 14, wherein:  
2           the elongate element having a diameter of 0.005-0.018 inch.

1           19.    The device of claim 14, wherein:  
2           the elongate element being biased toward an expanded position.

1           20.    The device of claim 14, wherein:  
2           the elongate element has an diameter of 0.005-0.010 inch.

1           21.    A kit for removing an obstruction in a blood vessel, comprising:  
2           an obstruction removing device having an elongate insertion element and an  
3           expandable obstruction engaging element extending from the elongate insertion element; and  
4           a catheter having an expandable balloon mounted thereto, the catheter having  
5           at least one lumen sized to receive the obstruction removal device.

1           22.    The kit of claim 21, further comprising:  
2           a delivery catheter which extends through the lumen of the catheter, the  
3           delivery catheter having a lumen in which the obstruction removing device is positioned.

1           23.    The kit of claim 21, wherein:  
2           the obstruction engaging element is in a straightened configuration when  
3           collapsed.

1           24.    A method of removing an obstruction in a blood vessel, comprising the  
2           steps of:  
3           providing an obstruction removal device and a guide catheter, the obstruction  
4           removing device having an elongate insertion element and an expandable obstruction  
5           engaging element extending from the elongate insertion element, the guide catheter having a

6 flow restricting element mounted thereto, the delivery catheter having at least one lumen  
7 sized to receive the obstruction removal device;  
8                   advancing the obstruction removal device through the guide catheter to an  
9 obstruction in a blood vessel;  
10                   expanding the flow restricting element to at least reduce blood flow in the  
11 blood vessel;  
12                   engaging the obstruction with the obstruction removal device while the flow  
13 restricting element is expanded; and  
14                   removing the obstruction.

1                   25.     An obstruction removal device, comprising:  
2                   an elongate element extending from an insertion element, the elongate element  
3 being movable from a collapse position to an expanded position, the elongate element  
4 forming helical coils having varying diameter, wherein the coils at a distal portion are larger  
5 than the coils at an intermediate portion.

1                   26.     The device of claim 25, wherein:  
2                   the elongate element has a proximal portion which has coils which are larger  
3 than the coils at the intermediate portion.

1                   27.     A method of removing an obstruction from a patient, comprising the  
2 steps of:  
3                   providing an obstruction removal device, the obstruction removal device  
4 having an engaging element extending from an insertion element, the engaging element being  
5 movable from a collapsed condition to an expanded condition, the engaging element having a  
6 proximal portion and a distal portion;  
7                   passing the obstruction removal device through an obstruction in a vessel with  
8 the engaging element in the collapsed position;  
9                   expanding the distal portion at a location distal to the obstruction so that the  
10 distal portion forms a trap to prevent the obstruction from traveling downstream; and  
11                   engaging the obstruction with the proximal portion of the obstruction removal  
12 device after the expanding step.

1                   28.     An obstruction removal device, comprising:

2 an elongate insertion element; and  
3 an obstruction engaging element extending from the insertion element, the  
4 obstruction removing element being movable from a collapsed position to an expanded  
5 position, the obstruction removing device forming at least one closed loop in the expanded  
6 position, the closed loop exerting substantially equal and opposing radial forces when  
7 collapsed.

1 29. The device of claim 28, wherein:  
2 the obstruction engaging element forms at least two loops in the expanded  
3 position, a first loop lying in a first plane when expanded and a second loop lying in a second  
4 plane when expanded.

1 30. The device of claim 29, wherein:  
2 the first plane is substantially perpendicular to the first plane.

1 31. The device of claim 29, wherein:  
2 the first loop is larger than the second loop, the first loop being positioned  
3 distal to the second loop.

1 32. The device of claim 28, wherein:  
2 the engaging element is formed by a core element and a filament wrapped  
3 around the core element.

1 33. An obstruction removal device, comprising:  
2 an elongate insertion element; and  
3 an obstruction engaging element movable from a collapsed position to an  
4 expanded condition, the engaging element having at least two wound sections having a  
5 filament wound around a core element, the wound sections being separated by a section  
6 substantially free of the filament.

1 34. The device of claim 33, wherein:  
2 the section which is substantially free of the filament is at least 1 mm long.

1 35. The device of claim 33, wherein:  
2 the section which is substantially free of the filament is at least 3 mm long.

1                   36.     The device of claim 33, wherein:  
2                   the section which is substantially free of the filament is no more than 6 mm  
3     long.

1                   37.     An obstruction removing device, comprising:  
2                   an elongate insertion element; and  
3                   an obstruction engaging element movable from a collapsed position to an  
4     expanded condition, the engaging element having a first section, a second section, and a third  
5     section, the second section being positioned between the first and third sections, the second  
6     section forming coils having a smaller diameter than coils formed by the first and third  
7     sections.

1                   38.     The device of claim 37, wherein:  
2                   the obstruction engaging element has a fourth section and a fifth section, the  
3     fourth section being positioned between the third and fifth sections, the fourth section  
4     forming coils having a smaller diameter than coils formed by the third and fifth sections.